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(54) Title: METHODS AND COMPOSITIONS FOR TREATING CONDITIONS INVOLVING ABNORMAL ANGIOGENESIS

(57) Abstract: The present invention features methods and compositions for preventing, reducing, or treating hypoxia and pathophysiological disorders involving abnormal angiogenesis. Thus, the present invention is useful for treating, reducing, or preventing ischemic conditions (characterized by a reduced blood flow or reduced angiogenesis, e.g., a myocardial infarct) and hypervascular conditions (characterized by excessive angiogenesis, e.g., cancer). Where an increase in angiogenesis is desired, the mammal being treated for an ischemic condition is provided with Related Transcriptional Enhancer Factor-1 (RTEF-1; as a recombinant polypeptide or as an expression vector) sufficient to increase expression of VEGF, FGFR, or COX-2. This results in a concomitant increase in angiogenesis. Conversely, a mammal being treated for a hypervascular condition is administered a composition that reduces the levels of RTEF-1, thereby reducing the expression of VEGF, FGFR, or COX-2, which results in a decrease in angiogenesis. Also disclosed are screening methods that make use of RTEF-1 for the identification of novel therapeutics for the treatment, prevention, or reduction of pathological disorders involving hypoxia or abnormal angiogenesis, namely, ischemic or hypervascular conditions.